

TIPS FROM OUR READERS

## Orthodontic wire loop for engaging dental floss or orthodontic elastomeric chain in the open tray implant impression technique



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An accurate implant impression is essential for a successful implant restoration, with various impression techniques being suggested.<sup>1</sup> The open tray (pick-up) impression technique has been recommended over the closed tray impression technique for improved accuracy,<sup>2</sup> although splinting the open tray impression copings is essential to prevent micromovement and for accurate 3D transfer of the implant locations to the definitive cast.<sup>3</sup> Splinting can be achieved in various ways,<sup>3,4</sup> including with dental floss and autopolymerizing resin or composite resin.<sup>4</sup> Placement of dental floss is cumbersome, and slippage may occur over the smooth surface of the impression coping.<sup>5</sup> Joshi et al<sup>5</sup> presented an alternative technique for splinting open tray impression copings by using orthodontic elastomeric chain and light-polymerizing composite resin. The purpose of the present article was to present a straightforward procedure for fabricating an orthodontic wire loop for engaging dental floss or orthodontic elastomeric chain in the implant impression. The orthodontic loops can be welded to the open tray impression copings by the dentist or added by the dental laboratory technician.

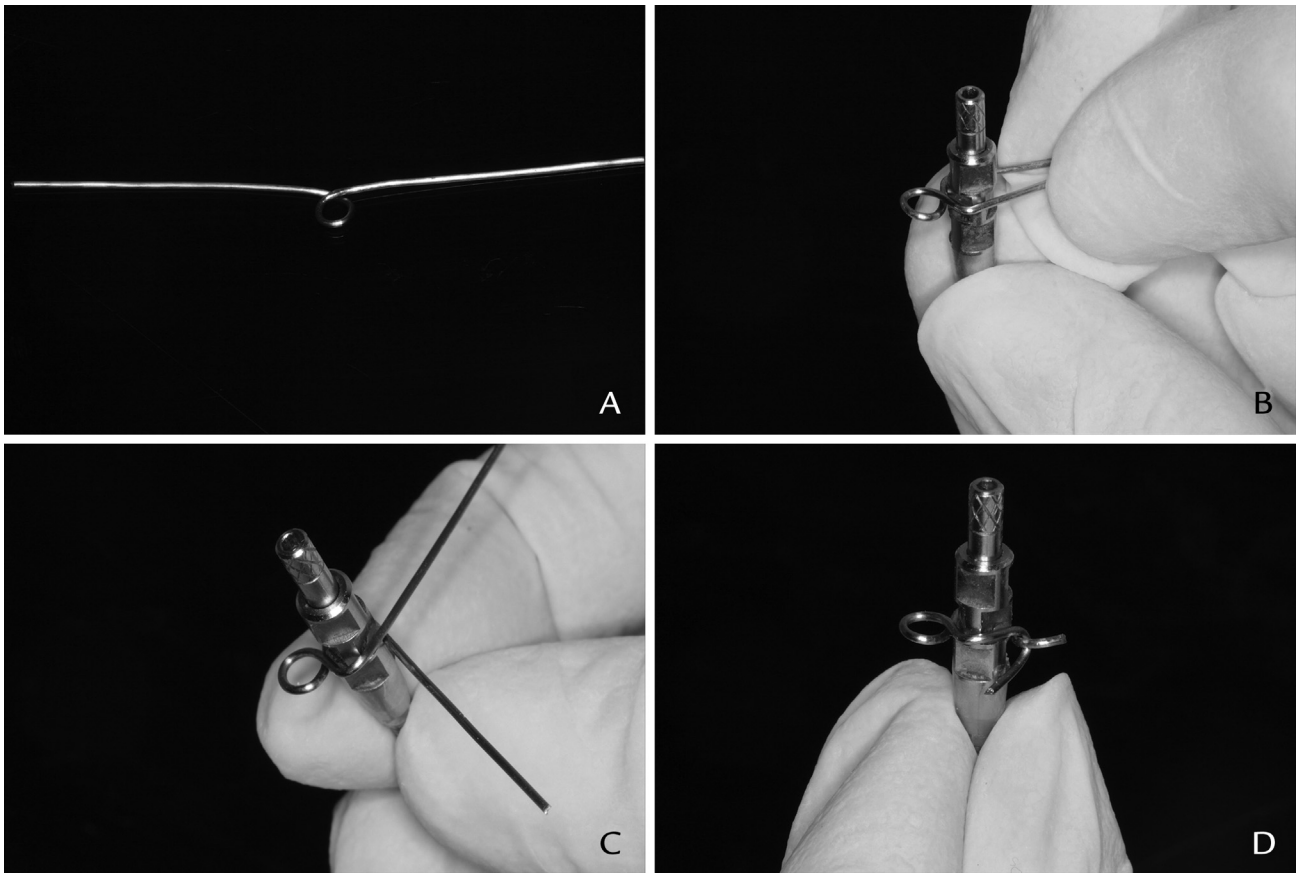
### TECHNIQUE

1. Remove the healing abutments (Healing abutment [AO]; Megagen) after satisfactory healing of the peri-implant soft tissue around the implants.
2. Place pick-up (open tray) impression copings (Pick up coping [AO]; Megagen) with 10-Ncm torque and make a periapical radiograph to verify proper seating of the impression copings.
3. Mark the future location of the orthodontic loops on the pick-up impression copings by using a permanent marker. The authors recommend placing the loops on the mesial and distal surfaces. Placement on the buccal and lingual surface may interfere with seating the tray and may cause tongue irritation. Remove the impression copings for the attachment of loops.
4. Select 60-mm, 23-gauge orthodontic arch wire (S304 Stainless steel; G&H), make 8 to 10mm-diameter loops (Fig. 1A), and place them in the marked locations (Fig. 1B), with the ends of the wire extending away from each other.
5. Wrap both ends of the orthodontic wire around the impression coping (Fig. 1C) and twist both ends of the wire to lock the loop in its place and cut excess (Fig. 1D).
6. Place the impression copings with orthodontic wire loop (Fig. 2A) and attach orthodontic E chain or pass floss (Fig. 2B) through the loop. Stabilize the impression coping with autopolymerizing resin (Pattern resin; GC) (Fig. 2C) or bulk-fill flowable composite resin.
7. Inject low-viscosity impression material (Extreme Lite; Medicept) around the impression copings. Fill the stock tray with a high-viscosity impression material (Extreme putty; Medicept) and seat intraorally.

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**Figure 1.** A, Eight to ten-mm-diameter loop made with orthodontic wire. B, Loop placed around marked area of impression coping. C, Ends of orthodontic wire wrapped around impression coping. D, Ends of orthodontic wire twisted to lock loop.



**Figure 2.** A, Intraoral placement of open tray impression coping with orthodontic wire loop. B, Dental floss engaged around orthodontic wire loop. C, Open tray impression copings stabilized with autopolymerizing resin.

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